DETAILED ESTIMATE

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Improvements to Roads and Drains at Deshabanndunagara and Surrounding areas in Ward No. 09 (Vidyaranyapura)

								Estimation Cost.Rs	**4700000.00**
Sl No	**Description of work**		**Mesurement**				**Qty**	**Rate**	**Amount**
		Unit	**No.**	**L**	**B**	**D**			
1	**Removing and refixing** stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33)								
		Sqm							
	BS slab of Drain								
	Open Drain (Sides & Bottom)	**Sqm**	Width=Perimeter of Drain in U Shape						
	ChikkaVenkatappa Layout								
	1st Main Road	Sqm	2	154.00	1.35		415.80		
					Total		**415.80**		
	Deduct 30% for Missing/Damaged						**124.74**		
	Consider 70% Qnty for Removing & Refixing						**291.06**		
	Basic rate	105.00							
	Area weightage 6%	6.3							
	Sub Total	**111.30**							
	Total						**291.06**	**111.30**	**32395.00**
2	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 21-22 Vol -I Pg No 5 item no 1.4.1)								
	New Drain	**Cum**							
	Deshbandhu Nagara								
	2nd Main Road	Cum	2	135.00	1.10	0.90	267.30		
	Cross Road	Cum	1	40.00	1.40	1.20	67.20		
	For Culvert								
		Cum	3	6.00	1.40	0.95	23.94		
	Drain Desilt	**Cum**							
	ChikkaVenkatappa Layout								
	1st Main Road	Cum	2	154.00	0.45	0.45	62.37		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	For Flagging Coarse	**Cum**							
	ChikkaVenkatappa Layout								
	1st Main Road	Cum	2	154.00	0.15	0.20	9.24		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**430.05**	**204.60**	**87989.00**
3	Providing granite slabs of selected quality roughly dressed having a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing etc., complete.(P.No.27,I.No.5.31.1)								
		Sqm							
	Provide 30% new BS Slab	From Item No.1					**124.74**		
	Basic rate	700.00							
	Area weightage 6%	42							
	Sub Total	**742.00**							
	Total						**124.74**	**742.00**	**92558.00**
4	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-2022 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	Deshbandhu Nagara								
	2nd Main Road	Cum	2	135.00	1.10	0.15	44.55		
	Cross Road	Cum	1	40.00	1.40	0.15	8.40		
	For Culvert								
		Cum	3	6.00	1.40	0.15	3.78		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**56.73**	**6327.20**	**358943.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
5	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 21-22 Vol -I Pg 17 item no 2.4.2)								
	Drain								
	Bottom Raft	**Cum**							
	Deshbandhu Nagara								
	2nd Main Road	**Cum**	2	135.00	0.90	0.15	36.45		
	Cross Road	**Cum**	1	40.00	1.20	0.15	7.20		
	Side Wall	**Cum**							
	Deshbandhu Nagara								
	2nd Main Road	Cum	4	135.00	0.15	0.60	48.60		
	Cross Road	Cum	2	40.00	0.15	0.90	10.80		
					Sub Total		**103.05**		
	Culvert								
	Bottom Raft								
		Cum	3	6.00	1.20	0.20	4.32		
	Side Wall								
		Cum	6	6.00	0.20	0.60	4.32		
					Sub Total		**8.64**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**111.69**	**7225.68**	**807037.00**
6	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 21-22 Vol -III Pg 99 item no 13.1) issue Rate								
	For Drain	Cum					103.05		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
		kg	Steel assumed 60Kg/Cum of Concrete				6183.00		
		tonne					**6.18**		
	For Culvert	Cum					8.64		
		kg	Steel assumed 90Kg/Cum of				777.60		
		tonne					**0.78**		
	Basic rate	103329							
	Area weightage 10%	10332.9							
	Sub Total	**113661.90**							
	Total						**6.96**	**113661.90**	**791156.00**
7	Providing and Fixing pre cast covering **Slab** made out of CC 1:2:4 with **10cm thick** and Finishing cutting ,including form work,curing,including cost of alll materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,copmplete. (Data Rate)								
	New Drain Cover Slab	**Sqm**							
	Deshbandhu Nagara								
	2nd Main Road	Sqm	2	135.00	0.90		243.00		
	Cross Road	Sqm	1	40.00	1.20		48.00		
	For Flagging Coarse								
	ChikkaVenkatappa Layout								
	1st Main Road	Sqm	2	154.00	0.90		277.20		
	Data rate	**2337.00**							
	Total						**568.20**	**2337.00**	**1327884.00**
8	Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge								
	Culvert Cover Slab	**Sqm**							
		Sqm	3	6.00	1.20		21.60		
	Data rate	**5418.00**							
	Total						**21.60**	**5418.00**	**117029.00**
9	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. 1;2;4(The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.1)								

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	Flagging coarse PCC	**Cum**							
	ChikkaVenkatappa Layout								
	1st Main Road	Cum	2	154.00	0.15	0.15	6.93		
	Flagging coarse Coping								
	ChikkaVenkatappa Layout								
	1st Main Road	Cum	4	154.00	0.15	0.10	9.24		
	Basic rate	6096.00							
	Area weightage 10%	609.60							
	Sub Total	**6705.60**							
	Total						**16.17**	**6705.60**	**108430.00**
10	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x150x200mm having block density more than 1800kg/m3 and minimum compressive strength of 4.00 N/mm2 conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications. (PWD SR 2021-22 Vol -II Pg 17 item no 6.33)								
	Flagging coarse	**Sqm**							
	ChikkaVenkatappa Layout								
	1st Main Road	Cum	4	154.00		0.40	246.40		
	Basic rate	1067.00							
	Area weightage 10%	106.70							
	Sub Total	**1173.70**							
	Total						**246.40**	**1173.70**	**289200.00**
11	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 14 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1C)								
	Qty Vide frm Item No-2+10	**Cum**					**430.05**		
	Total						**430.05**	**81.40**	**35007.00**
	Basic rate	74.00							
	Area Weightage 10%	7.40							
	Total	**81.40**							
12	**Cost of Haulage** Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4B)								
	Qty frm Item No-2+10	**t.Km**		430.05	1.28		**550.46**		

Sl No	Description of work		Mesurement				Qty	Rate	Amount
		Unit	No.	L	B	D			
	Total						**550.46**	**115.50**	**63579.00**
	15Km 7*15	105.00							
	Area Weightage 10%	10.50							
	Total	**115.50**							
								Grand Total	**4111207.00**
								GST Charges (12% of estimated cost)	**493345.00**
								DPR Charges (1% of estimated cost)	**47000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**47000.00**
								Miscellenious and rounding	**1448.00**
								Total Amount	**4700000.00**
								RUPEES FORTY SEVEN LAKHS ONLY	

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019,PWD 2021-2022, Issue RateS and Data Rates.

Assistant Engineer
Ward No. 09

ASSISTANT EXECUTIVE ENGINEER
Vidyaranyapura Sub Division
Bruhath Bengaluru Mahanagara Palike

Assistant Executive Engineer
Vidyaranyapura Sub Division

Executive Engineer
Byatarayanapura Division

Administrative Approval
Accorded For AS 47 Lakhs only
Head of A/C P2178
CER NO : 09 Dt: 11.04.20

ATA CE (YNK)

Technical Sanction
Accorded For 47 Lakhs only
Head of A/C P2178
CER NO : 03 Dt: 11/04/2022

DETAILED ESTIMATE

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Improvements to Roads and Drains at Yerappa Garden in Ward No. 09 (Vidyaranyapura)

Estimation Cost.Rs 9600000.00

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
1	**Dismantling** of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead I By Manual Means B Cement Concrete Grade M-15 & M-20 (PWD SR 2021-22 Vol III Pg no 8 Item No 2.7(i))								
	Old Culvert	**Cum**							
	Cross Road 1	Cum	1	5.00	1.50	0.23	1.73		
	Cross Road 2	Cum	1	4.80	1.50	0.23	1.66		
	W0911	Cum	1	6.00	1.20	0.23	1.66		
	Basic rate	731.00							
	Area weightage 10%	73.10							
	Sub Total	**804.10**					**5.04**	**804.10**	**4051.00**
	Total								
2	**Dismantling** of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead (iii) Dismantling Stone Masonry B Rubble stone masonry in cement mortar. (PWD SR 2021-22 Vol III Pg no 8 Item No 2.10(iv))								
	Old Culvert	**Cum**							
	Cross Road 1	Cum	2	5.00	0.50	0.60	3.00		
	Cross Road 2	Cum	2	4.80	0.50	0.60	2.88		
	W0911	Cum	2	6.00	0.50	0.60	3.60		
	Basic rate	481.00							
	Area weightage 10%	48.10							
	Sub Total	**529.10**					**9.48**	**529.10**	**5016.00**
	Total								
3	Earth work **Excavation** by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
	New Drain	**Cum**							
	4th A Cross Road (W0907)	Cum	2	83.50	1.10	0.90	165.33		
	W0911	Cum	2	82.00	1.10	0.90	162.36		
	W0907	Cum	1	49.20	1.10	0.90	48.71		
	New Culvert	**Cum**							
	Cross Road 1	Cum	1	5.00	1.40	0.95	6.65		
	Cross Road 2	Cum	1	4.80	1.40	0.95	6.38		
	4th A Cross Road (W0907)	Cum	1	6.20	1.40	0.95	8.25		
	W0911	Cum	1	6.00	1.40	0.95	7.98		
		Cum	1	6.00	1.40	0.95	7.98		
		Cum	2	6.10	1.40	0.95	16.23		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
	Drain Desilt								
	Yerappa Garden Main Road	Cum	1	230.00	0.60	0.45	62.10		
	W0602	Cum	2	104.00	0.45	0.45	42.12		
	W0917	Cum	2	32.00	0.45	0.45	12.96		
	W0919	Cum	2	47.00	0.45	0.45	19.04		
	W0913	Cum	2	46.50	0.45	0.45	18.83		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**584.91**	**204.60**	**119673.00**
4	Providing and laying in position **Plain Cement Concrete** Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	4th A Cross Road (W0907)	Cum	2	83.50	1.10	0.15	27.56		
	W0911	Cum	2	82.00	1.10	0.15	27.06		
	W0907	Cum	1	49.20	1.10	0.15	8.12		
	For Culvert	**Cum**							
	Cross Road 1	Cum	1	5.00	1.40	0.15	1.05		
	Cross Road 2	Cum	1	4.80	1.40	0.15	1.01		
	4th A Cross Road (W0907)	Cum	1	6.20	1.40	0.15	1.30		
	W0911	Cum	1	6.00	1.40	0.15	1.26		
		Cum	1	6.00	1.40	0.15	1.26		
		Cum	2	6.10	1.40	0.15	2.56		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**71.18**	**6327.20**	**450339.00**
5	Providing and laying in position **Reinforced Cement Concrete** for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. **M20** (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
	Drain								
	Bottom Raft	**Cum**							
	4th A Cross Road (W0907)	Cum	2	83.50	0.90	0.15	22.55		
	W0911	Cum	2	82.00	0.90	0.15	22.14		
	W0907	Cum	1	49.20	0.90	0.15	6.64		
	Side Wall	**Cum**							
	4th A Cross Road	Cum	4	83.50	0.15	0.60	30.06		
	W0911	Cum	4	82.00	0.15	0.60	29.52		
	W0907	Cum	2	49.20	0.15	0.60	8.86		
					Sub Total		**119.76**		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
	For Culvert								
	Bottom Raft	**Cum**							
	Cross Road 1	Cum	1	5.00	1.20	0.20	1.20		
	Cross Road 2	Cum	1	4.80	1.20	0.20	1.15		
	4th A Cross Road	Cum	1	6.20	1.20	0.20	1.49		
	W0911	Cum	1	6.00	1.20	0.20	1.44		
		Cum	1	6.00	1.20	0.20	1.44		
		Cum	2	6.10	1.20	0.20	2.93		
	Side Wall	**Cum**							
	Cross Road 1	Cum	2	5.00	0.20	0.60	1.20		
	Cross Road 2	Cum	2	4.80	0.20	0.60	1.15		
	4th A Cross Road (W0907)	Cum	2	6.20	0.20	0.60	1.49		
	W0911	Cum	2	6.00	0.20	0.60	1.44		
		Cum	2	6.00	0.20	0.60	1.44		
		Cum	4	6.10	0.20	0.60	2.93		
					Sub Total		**19.30**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**139.06**	**7225.68**	**1004796.00**
6	Supplying, Fitting and Placing TMT Fe550 bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					119.76		
		kg	Steel assumed 60Kg/Cum of Concrete				7185.78		
		tonne					**7.19**		
	For Culvert	Cum					19.30		
		kg	Steel assumed 90 Kg/Cum of Concrete				1736.64		
		tonne					**1.74**		
	Basic rate	103329.00							
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**8.92**	**113661.90**	**1014140.00**
7	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting ,including form work,curing,including cost of all materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,copmplete. (Data Rate)								
	For New Drain	**Sqm**							
	4th A Cross Road (W0907)	Sqm	2	83.50	0.90		150.30		
	W0911	Sqm	2	82.00	0.90		147.60		
	W0907	Sqm	1	49.20	0.90		44.28		
	Drain Desilt	**Sqm**							
	Yerappa Garden Main Road	Sqm	1	230.00	0.90		207.00		
	W0602	Sqm	2	104.00	0.75		156.00		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
	W0917	Sqm	2	32.00	0.75		48.00		
	W0919	Sqm	2	47.00	0.75		70.50		
	W0913	Sqm	2	46.50	0.75		69.75		
	Data rate	**2337.00**							
	Total						**893.43**	**2337.00**	**2087946.00**
8	Providing and Fixing pre cast **Covering Slab 250mm thick** made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge								
	For Culvert	**Sqm**							
	Cross Road 1	Sqm	1	5.00	1.20		6.00		
	Cross Road 2	Sqm	1	4.80	1.20		5.76		
	4th A Cross Road (W0907)	Sqm	1	6.20	1.20		7.44		
	W0911	Sqm	1	6.00	1.20		7.20		
		Sqm	1	6.00	1.20		7.20		
		Sqm	2	6.10	1.20		14.64		
	Data rate	**5418.00**							
	Total						**48.24**	**5418.00**	**261365.00**
9	Earth work in surface **Excavation** by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth. (PWD SR 21-22 Vol I Pg no 8 Item No 1.12)								
	For New Road								
	4th A Cross Road (W0907)	Cum	1	83.50	5.40	0.40	180.36		
	W0909	Cum	1	55.90	5.50	0.40	122.98		
	W0911	Cum	1	82.00	4.40	0.40	144.32		
	For CC Road								
	Yarappa Garden								
	Cross Road 1	Cum	1	38.00	4.60	0.10	17.48		
	Cross Road 2	Cum	1	48.00	4.30	0.10	20.64		
	Basic rate	65.00							
	Area weightage 10%	6.50							
	Sub Total	**71.50**							
	Total						**485.78**	**71.50**	**34734.00**
10	KSRRB 300-58. **Compaction of original ground** by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.(I No-19.64,P No-147) 18-19								
	For New Road	**Sqm**							
	4th A Cross Road (W0907)	Sqm	1	83.50	5.40		450.90		
	W0909	Sqm	1	55.90	5.50		307.45		
	W0911	Sqm	1	82.00	4.40		360.80		
	Basic rate	6.00							
	Area weightage 6%	0.36							
	Sub Total	**6.36**							
	Total						**1119.15**	**6.36**	**7118.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
11	Construction of **Granular Sub-Base** of required grading as per design mixing in a mechanical mix plant at OMC, carriageof mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 (For Grading -V Material) (PWD SR 21-22 Vol III Pg no 19 Item No 4.1 A (v))								
		Cum							
	For New Road								
	4th A Cross Road (W0907)	Cum	1	83.50	5.40	0.15	67.64		
	W0909	Cum	1	55.90	5.50	0.15	46.12		
	W0911	Cum	1	82.00	4.40	0.15	54.12		
	Basic rate	2347.00							
	Area weightage 10%	234.70							
	Sub Total	**2581.70**							
	Total						**167.87**	**2581.70**	**433397.00**
12	Providing, laying, spreading and compacting graded stone aggregate to **Wet Mix Macadam** specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no 24 Item No 4.27 (A))								
	For New Road	**Cum**							
	4th A Cross Road (W0907)	Cum	1	83.50	5.40	0.23	103.71		
	W0909	Cum	1	55.90	5.50	0.23	70.71		
	W0911	Cum	1	82.00	4.40	0.23	82.98		
	Basic rate	2394.00							
	Area weightage 10%	239.40							
	Sub Total	**2633.40**							
	Total						**257.40**	**2633.40**	**677850.00**
13	KSRRB 500-1.**Cleaning** the existing WBM Road surface including removing of binding materials and other foreign matter with wire brushes and small picks sweeping with brooms or soft brushes and finally dusting with old gunny bags and bar or compressed air to receive bituminous treatment including cost of all materials, labhour, HOM of machineries complet as per specifications.(P.No.158,I.No.21.1) 18-19								
	New Road								
	4th A Cross Road (W0907)	Sqm	1	83.50	5.40		450.90		
	W0909	Sqm	1	55.90	5.50		307.45		
	W0911	Sqm	1	82.00	4.40		360.80		
	Basic rate	21.00							
	Area weightage 6%	1.26							
	Sub Total	**22.26**							
	Total						**1119.15**	**22.26**	**24913.00**
14	Providing and applying **Primer Coat** with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no 29 Item No 5.1 A (i))								
	New Road								
	4th A Cross Road (W0907)	Sqm	1	83.50	5.40		450.90		
	W0909	Sqm	1	55.90	5.50		307.45		
	W0911	Sqm	1	82.00	4.40		360.80		
	Basic rate	44.00							
	Area weightage 10%	4.40							
	Sub Total	**48.40**							
	Total						**1119.15**	**48.40**	**54167.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
15	Providing and laying **Dense Graded Bituminous Macadam** with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))								
	New Road								
	4th A Cross Road (W0907)	Cum	1	83.50	5.40	0.05	22.55		
	W0909	Cum	1	55.90	5.50	0.05	15.37		
	W0911	Cum	1	82.00	4.40	0.05	18.04		
	Basic rate	9889.00							
	Area weightage 10%	988.90							
	Sub Total	**10877.90**							
	Total						**55.96**	**10877.90**	**608701.00**
16	KSRRB 500-2.**Cleaning** the existing black topped surface with brooms,soft brushes and finally dusting with old gunny bags and/or compressed air to receive bituminous treatment including cost of all materials,labhour, HOM of machineries complete as per specifications.(P.No.158,I.No.21.2).								
	BC overlay	**Sqm**							
	4th A Cross Road (W0907)	Sqm	1	83.50	5.40		450.90		
	W0909	Sqm	1	55.90	5.50		307.45		
	W0911	Sqm	1	82.00	4.40		360.80		
	Basic rate	5.00							
	Area weightage 6%	0.30							
	Sub Total	**5.30**							
	Total						**1119.15**	**5.30**	**5932.00**
17	Providing and applying **Tack Coat** with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no 29 Item No 5.4 (ii))								
	Yerappa Garden	**Sqm**							
	4th A Cross Road (W0907)	Sqm	1	83.50	5.40		450.90		
	W0909	Sqm	1	55.90	5.50		307.45		
	W0911	Sqm	1	82.00	4.40		360.80		
	Basic rate	15.00							
	Area weightage 10%	1.50							
	Sub Total	**16.50**							
	Total						**1119.15**	**16.50**	**18466.00**
18	Providing and laying **Bituminous Concrete** with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16)								
	Yerappa Garden	**Cum**							
	4th A Cross Road (W0907)	Cum	1	83.50	5.40	0.04	18.04		
	W0909	Cum	1	55.90	5.50	0.04	12.30		
	W0911	Cum	1	82.00	4.40	0.04	14.43		
	Basic rate	11531.00							
	Area weightage 10%	1153.10							
	Sub Total	**12684.10**							
	Total						**44.77**	**12684.10**	**567817.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
19	**Road Marking** with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)								
	Yerappa Garden	**Sqm**							
	4th A Cross Road (W0907)	Sqm	2	83.50	0.10		16.70		
	W0909	Sqm	2	55.90	0.10		11.18		
	W0911	Sqm	2	82.00	0.10		16.40		
	Basic rate	478.00							
	Area weightage 10%	47.80							
	Sub Total	**525.80**							
	Total						**44.28**	**525.80**	**23283.00**
20	**Dismantling** of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately MORTH Specification No. 202(PWD SR 2021-22 Vol -III P.No.10 - I.No.2.19)								
	Yarappa Garden	**Cum**							
	Cross Road 1	Cum	1	38.00	4.60	0.20	34.96		
	Cross Road 2	Cum	1	48.00	4.30	0.20	41.28		
	Basic rate	422.00							
	Area weightage 10%	42.20							
	Sub Total	**464.20**							
	Total						**76.24**	**464.20**	**35391.00**
21	Construction of **Dry Lean Cement Concrete** Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm,aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ m3 , optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 t vibratory roller, finishing and curing. MORTH Specification No. 601(PWD SR 2021-22 Vol -III P.No.43 - I.No.6.1)								
	Yarappa Garden	**Cum**							
	Cross Road 1	Cum	1	38.00	4.60	0.15	26.22		
	Cross Road 2	Cum	1	48.00	4.30	0.15	30.96		
	Basic rate	4196.00							
	Area weightage 10%	419.60							
	Sub Total	**4615.60**							
	Total						**57.18**	**4615.60**	**263921.00**
22	Providing and constructing un-reinforced plain **Cement Concrete Pavement,** thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 M30 (Grade), coarse and fine aggregates conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, , primer, sealant , curing of concrete slabs for 14- days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete MORTH Specification No.1501 . as per the directions of the Engineer-in-charge of the work. (PWD SR 2021-22 Vol -I Pg 138 item no 20.29)								
	Yarappa Garden	**Cum**							
	Cross Road 1	Cum	1	38.00	4.60	0.15	26.22		
	Cross Road 2	Cum	1	48.00	4.30	0.15	30.96		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
	Basic rate	6837.00							
	Area weightage 10%	683.70							
	Sub Total	**7520.70**							
	Total						**57.18**	**7520.70**	**430034.00**
23	**Cutting transverse** contraction joints 3 to 4 mm wide and depth 60mm in concrete slab using concrete cutting machine with diamond studded saw within 48 hours of casting of bay / slab etc. complete including subsequent widening of the groove 8 to 10 mm. wide at top having depth of 15 mm. as directed by Engineer incharge. MORTH Specification No. 602.6.3(PWD SR 2021-22 Vol -III Pg 146 item no 4)								
	Yarappa Garden	**m**							
	Cross Road 1	m	10	4.60			46.00		
	Cross Road 2	m	13	4.30			55.90		
	Basic rate	70.00							
	Area weightage 10%	7.00							
	Sub Total	**77.00**							
	Total						**101.90**	**77.00**	**7847.00**
24	Providing to contraction joints polysuphide sealent (Pouring grade) confirming to BS : 5212 - 1989 into sawed groove widened at top for sealent reservoir of specified size and shape as per detailed drawing including fixing Polyethylene foam backer rod of required diameter (approx. 25% larger than the initial 3 mm.to 4 mm. joint) overlaid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet / air compressor and allowing joint to become thoroughly dry before sealent is applied and applying primer. (A) Contraction and longitudinal joints (15 mm. deep x 8mm.wide). MORTH Specification No. 602.6.3(PWD SR 2021-22 Vol -III Pg 147 item no 5)								
	Qty Vide frm Item No-23	**m**					101.90		
	Basic rate	165.00							
	Area weightage 10%	16.50							
	Sub Total	**181.50**							
	Total						**101.90**	**181.50**	**18495.00**
25	**Loading and Unloading of Stone Boulder**/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 14 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1C)								
	Qty Vide frm Item No-1+2+3+9+20	**Cum**					1161.45		
	Deduct 10% For Vide						116.14		
	Total						**1045.30**	**81.40**	**85088.00**
	Basic rate	74.00							
	Area Weightage 10%	7.40							
	Total	**81.40**							

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty.	Rate	Amount
26	**Cost of Haulage** Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4B)								
	Qty frm Item No-25	**t.Km**		1045.30	1.28		1337.99		
	Total						**1337.99**	**115.50**	**154538.00**
	15Km 7*15	105.00							
	Area Weightage 10%	10.50							
	Total	**115.50**							
								Grand Total	**8399018.00**
								GST Charges (12% of estimated cost)	**1007883.00**
								DPR Charges (1% of estimated cost)	**96000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**96000.00**
								Miscellenious and rounding	**1099.00**
								Total Amount	**9600000.00**
								RUPEES NINETY SIX LAKHS ONLY	

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019, PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Executive Engineer
BBMP

Technical Sanction
Accorded For Rs 96.00 lakhs only
Head of A/C P0190
CER NO :03 Dt:11.04.2022

ADMINISTRATIVE APPROVAL
Accorded For Rs. 96.00 Lakhs.
Head of A/c. P0190
Div. Ref No. 04 Date 28/06/2022
AE
EE(BTP) 28/06/22